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ABSTRACT

A study investigated a new method of measuring organizational communication other than the audit methods currently in use. The method, which employs fractionation procedures, was used with workers from five different business groups within a large multinational corporation. The results showed that: (1) workers could use the scales reliably, (2) the method produced significantly more variance than did the traditional procedures, (3) employees were able to discriminate a greater number of values than allowed by the traditional scales, and (4) theoretically valid relationships were obtained. (FL)

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The Use of Fractionation Scales for Communication Audits

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The Use of Fractionation Scales for Communication Audits

Abstract

This paper proposes a new and more precise method of measuring organizational communication than the one currently employed by the ICA Communication Audit and other audit systems. An audit was performed with employees from five different business groups from within a large multinational corporation to determine the utility of fractionation procedures. The results showed that, 1) workers can use these scales, 2) they use them reliably, 3) these methods produce significantly more variance than traditional procedures, 4) workers discriminate a greater number of values than allowed by traditional fixed choice items, and, 5) theoretically valid relationships were obtained. As a result of these findings, this paper advocates the adoption of direct-magnitude estimate fractionation scales for the measurement of organizational communication.

The Use of Fractionation Scales for Communication Audits[1]

I. Introduction

Since the first systematic measurement of organizational communication some thirty years ago (Jacobson & Seashore, 1951), and the first published use of the term "communication audit" some five years later (Odiorne, 1954), the measurement of organizational communication has grown from a scattering of single-method, single-organization, one-shot research attempts to systematic multi-method, investigations in large numbers of organizations. For example, the LTT/OCD audits, similar to the ICA Audit (Goldhaber & Rogers, 1979), have been repeated by Wiio (1979) and associates in at least 29 organizations, mainly in Finland. The ICA Audit itself has so far been applied to over 20 organizations in the United States and Canada. Because the latter has been more highly publicized and institutionalized, it is the subject of focus here. However, a complete discussion of the ICA Audit is beyond the scope of this paper. For an excellent description of the Audit we highly recommend Goldhaber and Rogers (1979).

The ICA Audit is operated by an organization of its own numbering in the hundreds of members. It has implemented formalized training and certification procedures for them, as well as centralized the management of instrument development, analysis procedures, and data base management. This organizing appears to have had positive effects on the social and theoretical intrastructure of the organizational communication field. Perhaps foremost and far reaching are some indirect effects. The Audit has expanded and made more discernable the "invisible college" of

organizational communication scholars. It also appears to have fostered greater conceptual consensus. Similarly, it may have stimulated the number, scope, and quality of comprehensive literature reviews (Goldhaber, et al., 1978; Dennis, et al., 1978; Monge, et al., 1978; Farace, et al,., 1978), and texts (Farace, et al., 1978; Rogers & Rogers, 1977; Goldhaber, et al., 1979) which have appeared in the last few years. It may not be entirely coincidental that most of these syntheses have multiple authors.

The Audit has also more direct and immediate effect through its professional education role. Research skills and knowledge among scholars has grown more widely and rapidly than would have occurred without auditor training and certification. Furthermore, the Audit has expanded scholars' access to organizations and hence, increased their richness of experiences about practical organizational communication problems. As a result, theory construction efforts have profited.

While the Audit appears to have had these major meta-theoretical organizational effects, it also appears to have enhanced the substantive and methodological quality of organizational communication research. Perhaps most significant among a number of such effects is that the Audit offers promise, or at least a prototype, for enabling careful examination of some critical issues. In particular those concerning the: 1) generalizability of findings, 2) levels of appropriate aggregation, and 3) appropriate statistical testing procedures. These are issues thought important by proponents and critics of organizational communication theory. Clearly, such examination is possible because the very same methods are being applied to a number of organizations.

Nevertheless, herein lies a potential theoretical fault. It can be inferred from contingency theories (Lawrence & Lorsch, 1967; Galbraith, 1977) that organizational communication processes vary widely, depending on environmental conditions. Thus, mechanical administration of the same measures across different organizations (or different functional subunits within one organization) may fail to capture not only important variance among them, but crucial unique variance within many different organizations. This suggests that extending contingency theory to the methodological level requires application of a custom mix of measurement tools for each organization based on otherwise known characteristics. Recent empirical evidence may be used to support this position (Tushman, 1977,1979; Danowski, 1980; Kapitula & Barnett, under review). Obviously, as the variance increases in applying such tools, theorists' dreams of empirically treating issues of generalizability, aggregation, and statistical testing would drift further from fullfillment.

Nevertheless, a notable counterargument to the radical extention of contingency views exist on both theoretical and measurement levels. Contingent variation is not scientifically observable unless the same measurement procedures are consistently applied across organizations. Otherwise, contingency "theories" cease to be such, for they are not falsifiable. Observed contingent variation may be an artifact of the variance in measurement techniques used. This alternative explanation cannot readily be refruted without the same measurement techniques being used across different organizations.

Nevertheless, this counter argument is not intended to lay to

rest theoretical questioning of the measurement procedure used by the ICA, LTT/OCD or other audit approaches. If the audit scales, despite their consistant application, do not represent precise variance in organizational communication processes, then they are limited. Wide scope theory construction and revealation of subtle effects are restricted. In general, the more the processes of scientific interest varies, the more precise the measurement scales must be. This is particularly true, since accurate assessment of change over time is important. Also at a practical level, more precise scaling enables finer adjustments in an organization's communication patterns. Furthermore, there is increased opportunity to observe impacts on organizational effectiveness.

Most standard auditing instruments rely on crude ordinal scales, mainly 4 or 5 point Likert-type scales, and sometimes 7 point Semantic Differential Scales. Clearly, investigators have not chosen these limited scales out of sheer naivite. Contemporary (although largely untested) academic "folk wisdom" holds that most workers cannot effectively understand or use more sophisticated scales. So, compromises in measurement have been made.

However, the basic principles of scientific evidence suggest it is inappropriate to leave such important scaling assumptions untested. The potential theoretical implications are too great. For this reason, we embarked on the research reported here, which measures many of the same constructs used to measure communication climate in the ICA and LTT/OCD Audits. However, we used <u>metric fractionation scales</u>, rather than ordinal scales. Before reporting the actual methods, samples and results, the issues surrounding standard ordinal and more precise scales should be discussed.

II. Measurement Theory

The process of measurement essentially involves setting in a one-to-one correspondence the magnitude or quantity of some attribute possessed by a set of stimuli with the set of real numbers. The real number system has five properties which are important to the measurement process. They are: 1) It is ordered, such that, one is less than two is less than three, and so on, (1<2<3<...<n-1<n). 2) The distances between the intervals are equal. That is, the difference between 2 and 3 is equal to the difference between 4 and 5 (3-2=5-4). 3) It has a true (absolute) zero point. The first three properties are those generally associated with ratio scales. The real numbers have two additional properties which have important implications for measurement. 4) The real number system is unbounded or infinite. 5) It is infinitely dense. Between any two values a third can be placed without limit.

It is important to select a measurement system which meets these requirements because the tools of mathematics can be more fully applied to the gathered data. When choosing one that does not meet these requirements the researcher must set aside certain assumptions before performing any mathematical operations. For example, to divide requires an absolute zero point. Without it, the ratio is meaningless.

The ICA Communication Audit currently employs Likert-type items to measure an organization's communication patterns. They are bounded, five point fixed-choice items. They meet only the first two requirements of the real numbers order and equal intervality. They fail to meet the other three; they do not have an absolute zero point, they are severely bounded limiting the possible variation in

measurement, and, they limit density. These qualities severely restrict the instrument's precision of measure. Since these scales discriminate only five different values, they build 20% error into the measurement process. Due to their form, they are incapable of precision greater than 80% accuracy. When coupled with measurement error (assigning the stimulus to the wrong category) and unreliability, these measures may be further limited in validity and the recommendations to modify an organization's communication structure may be erroneous.

As an alternative to the currently employed measurement procedures, the direct magnitude estimate form of fractionation scales may be used to measure an organization's communication. Torgerson (1958:94) describes the fractionation method as follows:

> The logic of the fractionation methods can be stated quite simply: It is assumed that a subject is capable of directly perceiving and reporting the magnitude of a sense-ratio: i.e., the ratio between two subjective magnitudes. This assumption is, of course, subject to tests of internal consistancy. Fractionation methods are found in two general forms. In one form, the subject is presented with two stimuli and instructed to report the subjective ratio between them with respect to the designated attribute. For example, two tones of the same pitch might be presented to the subject with instructions to report the ratio of loudness of the first tone to the second. We shall refer to methods that use this approach as direct-estimate methods.

The usual procedures this method employs and the approach this paper advocates, is essentially a special case of subjective-estimate method. Assume that there are n stimuli to be scaled with respect to some attribute. The researcher provides subjects a standard, anchored at one end with the absolute zero point (none of the attribute) and at the other by some arbitrary value. Often, this

point is one of the stimuli to be scaled, either the largest or smallest stimulus of the group. However, Stevens (1956) recommends a middle stimulus or an average value to serve as the standard's upper bound. This does not bound the scale and is easier to use when the magnitudes of the individual stimuli are unknown. The researcher then presents the remaining stimuli along with the standard, and the subjects estimate the ratio of the stimuli to the standard. Repeated judgements, by a large number of different observers are necessary to obtain stable estimates.

While these procedures have been frequently employed in psychophysical research (Torgerson, 1958), they have less often been used to study attitudes or the perception of abstract attributes (such as how much information is received from a source). Some notable exceptions deal with the mass media (Barnett & McPhail, 1975, 1980), perceived uncertainty (Barnett & Hughes, 1978), organizational attitudes (Hamlin & Hughes, 1980), perceived dominance (Brandt, 1980) and attitude change (Kaplowitz, et al., 1980). While not directly comparable, the Galileo(tm) metric multidimensional scaling procedures (Woelfel & Fink, 1980; Woelfel, et al., 1980) uses a variation of the same method. The researcher provides subjects a standard where zero is no difference and some value is set as the standard's upper limit. The subjects then determine the magnitude of difference among pairs of concepts.

There are a number of advantages of fractionation scales made possible by their correspondence to the real number system. They allow for considerable variance. They are unbounded and are ideally suited to measure change over time and thus, the process of communication. They are capable of fine discriminations among

stimuli and they do not build error into the measurement process. Also, they have advantages in theory construction and allow for greater control over the measured pheromenon. We shall deal with these advantages one at a time.

According to Danes and Woelfel (1975), a goal of the measurement process is to create a scale which will maximize the potential variation in the magnitude of a measured attribute. While maximizing the variance, a scale should also be reliable. That is, if a group of observers measures a set of stimuli, when they again measure the stimuli in the future, the variances should be the same. For any single stimulus, however, the goal of the measurement process is for the different observers to agree on the precise magnitude of an attribute possessed by the stimulus and thus to limit the variance about the mean response. In the measurement of organizational communication, many different individual stimuli may be measured by a single question. For example, "How much information do you receive from your immediate supervisor?" This question may evoke a variety of responses. For example, there may be a number of different supervisiors and, ideally, the measures should precisely discriminate how they vary in the amount of information they make available to their subordinates. Thus, the criterion for selection of a measurement system to observe organizational communication should be one that maximizes variance while at the same time maximizing the reliability. The direct magnitude estimate form of fractionation scales meets this requirement of maximizing the potential for variance. Its reliability in organizational settings may be determined.

Because fracationation scales have a true zero point and are

unbounded, they are capable of measuring change over time and the process of communication. Subjects are free to respond with any real number when describing an organization's communication patterns. True variance is not limited by the scale. As a result, the differences in communication patterns are not homogenized and the differences among organizations (or functional subsystems) are not restricted. No matter how extreme an judgement may become, the instrument is capable of describing this change. The variance, coupled with the true zero point, makes possible the calculation of the rate of organizational change with great precision. By subtracting the scale values over time, change may be expressed as a velocity. Velocity is the ratio of change in the magnitude of an attribute to the change in time ($V = s/t$). Given multiple measures, accelerations may also be calculated. Again, acceleration is a ratio of the change in velocity to the change in time ($A = V/t$). Arundale (1973, 1977) has argued that velocity and acceleration are necessary to discuss the process of communication. Since the cruder scales have no true zero point, calculations of these ratios are impossible and any discussion of the process of communication is inappropriate.

This form of fractionation scale has unlimited density. Thus, these scales do not build error into the measurement process, although error may result if an observer assigns the wrong value to a stimulus. This characteristic of the scale is important, even if observers do not use all the allowable values. (They can't, since the scale is dense without limit.) It simply suggests that the measurement device is capable of precision, limited only by an observer's senses and not by the scale itself.

Scales of this form have advantages in theory construction and in the empirical tests of these theories. Their unrestricted range and density make possible the determination of subtle relations among variables. This is of special importance when the relations are nonlinear or when they hold only within certain limits. The crude scales truncate the range and obscure the limits. They allow for only the grossest nonlinear relations. The goals of science are precise prediction, to make possible the construction of accurate theories (explanation) and subtle control. Given these goals, one should adopt measurement tools which facilitate their accomplishments.

The last point is important when applying the findings of a Communication Audit to improve an organization's functioning. Common questions executives might ask are, "Where do the returns to my organization per dollar spent on communication activities begin to diminish?","Where will I get the greatest payoff per dollar spent on communication activities?" Or, "When will the payoff occur?". These questions imply nonlinear relations between money spent and the magnitude of a measured communication attribute. The scales currently used in the Audit are incapable of the precision necessary to answer these questions.Thus, even from an pragmatic view the most precise measurement system should be adopted.

While direct-magnitude estimate fractionation scales have theoretical advantages, they have not been widely adopted to measure communication variables. Certainly agruments exist against their use. We have heard three. One is that they are too difficult for the general public, e.g., workers who complete the communication audit. Two is because respondents may report any real number, they must not

be reliable. And, three is the question; Is it really necessary to have scales with such great precisicn when people do not normally differentiate in that much detail?

These arguments may be taken to be empirical questions. If three criterion can be met: 1) workers are able to use these scales, 2) they do differentiate communication stimuli with more detail than is allowed by the crude traditional scales, and, 3) they are used reliably, then because of the theoretical and practical advantages, they should be adopted for the ICA Communication Audit.

Limited past empirical research indicates that the general public can use these measurement tools. Barnett, et al. (1976) measured political attitudes with a random sample of the public. Hamlin and Hughes (1980) used these scales to measure worker attitudes. In both cases, theorically valid results were reported. Barnett and Hughes (1978) reported a reliability of .929 for a 14 item scales to measure voters' certainty of the presidential candidates' issue positions. Brandt (1980) reports intercoder reliabilities of .949 in the measurement of dominance.

Hypotheses

The disscussion above suggests the following hypotheses:

1. H1: Workers will be able to use fractionation scales to describe the communication patterns in the work place.

2. H2: Workers will use more that five levels of discrimination to differentiate their communication activities.

3. H3: Workers will use fractionation scales reliably to describe their communication activities. These reliability levels will be equivalent to those reported for the current ICA procedures. And, the fractionation method will result in more reliable variance

than in the current ICA Audit procedures.

III. Methods

To test the above hypotheses, a communication audit was carried out using fractionation scales to measure certain communication activies.

Site Selection

Five sites from with a large multinational corporation were selected to reflect high contrast on several dimensions--communication practices, union activities, technology, business life cycle status, geographical location and employee status composition. In this way, it was possible to ascertain if a wide range of different types of workers in different work situations could use the fractionation procedures. The sites are described below:

1 northeastern, non-union, advanced technology, growing business, predominantly hourly work force

2 northeastern, union, high technology, growing business, predominantly technical & hourly work force

3 southern, union, low technology, stable business predominantly hourly work force

4 northeastern, non-union, R&D, harvest business, predominantly exempt scientists

5 midwestern, non-union, low technology, stable business, predominantly hourly work force

Instrument Construction

The instrument was designed and pretested at a sixth corporate site. It employed many of the same items as in the ICA Audit's written questionnaire. Paralell questions to the ICA instrument were used on: information received (actual and ideal), sources of information, (actual and ideal), and organizational outcomes. However, these questions were altered to use fractionation scales. For example, workers were asked to score how much information they

received on twelve organizational topics. Each question asked respondents to let 50 represent the average amount of a given topic and zero represented none of the topic. Employees were asked to quantitatively estimate how much information they received in relation to this standard. Next, the employees were asked to estimate how much they needed of each information topic.

Employees also scored 19 sources of information, using the same scale, for six attributes: actual use, perferred use, ease in access, usefulness, accuracy and timeliness. The sources were: coworkers in my unit, workers in other units, supervisor, middle managers, top managers, the grapevine, group meetings, local plant newspaper, local publications and newsletters, written letters, memos and reports, bulletin boards, company wide annual reports, local radio and tv news.

Further, in line with the ICA Audit, employees were asked how satisfied they were with 11 organizational environment attributes. Again, employees were to assume that 50 was average satisfaction and zero was no satisfaction. The instrument also included site unique questions, or what Goldhaber and Rogers call cafeteria items. A copy of the complete questionnaire, with obscured references to the host corporation, appears at the end of the paper.

Data Collection

Selection of subjects was determined through a single stage, stratified random sample. The primary sampling unit for the study was the individual employee. Population composition data were collected for each site. Sampling strata were defined by worker status--hourly individual contributors, nonexempt salaried, clerks, secretaries and technicians, and exempt professional contributors.

The number and composition of strata varied among the sites as a result of the frequency of workers assigned to each of several worker categories. The strata constructions were determined as a result of the number of workers in each category.

An analysis of the standard errors from the pretest results indicated that variation in responses was associated with worker status. Direct examination of the standard errors implied, on most variables, that the opinions of hourly employees were less variable than those of exempt employees. As a result of this pattern of variability, it was determined that the most appropriate sampling allocation procedure was Optimum, or Neyman Allocation (Neyman, 1934). It is designed to minimize within stratum variance for a fixed total sample size.

Cost and production restrictions limited the sample size decision for this study to 20% of the total population for each independent site. Employee names were randomly selected for each stratum with the aid of sequential personnel computer listings. A random number table was used to identify the participants.

Written questionnaires were administered in group meetings at each site. An administrator was present to answer any questions raised by employees. The numbers of participants and response rates appear in the results section.

The Evaluation of the Hypotheses

H1: To evaluate hypothesis 1, the response rates for the indivdual items will be examined. Since these data will be used only in a descriptive manner, to indicate whether or not respondents can complete fractionation scales, no inferential statistics will be calculated. That is, no test of significance will be performed.

H2: To determine if the subjects use more than five categories when completing the questionnaire, the following procedures will be performed. The unique responses from each site for every item are counted. Then, they are averaged among the five sites to control for the effects of sample size. This value, the mean number of unique responses for each item, will be the unit of analysis for the test of hypothesis 2. A simple T-test will be performed to determine if this value is significantly greater than the possible number of different responses (5) in the ICA Audit.

H3: Hypothesis 3 will be evaluated by determining the reliabilities and variances of five scales (Information Received-Actual, Information Received-Ideal, Information Sources-Actual, Information Sources-Ideal and Organizational Outcomes). These will be compared to the equivalent scales in the ICA Communication Audit, using the coefficients reported by Goldhaber and Rogers (1979).

To compare the reliability of these new measures with the ICA Communication Audit, Cronbach's alpha will be used. These procedures are routinely applied to all new tests(Nunnally,1978:214). The formula for alpha is:

$$rkk = k/k-1(1- \quad / \quad)$$

where, rkk =the reliability of the whole test

k =the number of itmes

=the sum of the items in the covariance matrix

Coefficient alpha provides a good estiamte of reliability, since it is based on the internal consistency of the instrument's items. Thus, this formula considers sources of measurement error that are not based strictly on the sampling of items, but rather on the sampling of situational factors accompanying the items (Nunnally,

1967:210). Due to the uniqueness of the objective environments of the five sites, the reliability of the scales was determined separately.

IV. Results

H1: The response rate for the fractionation scales ranged from 92% to 97%, with a mean for the five sites of 95.6%. The lowest response rate for any set of items for any of the five sites was 86%. Clearly, workers seem to be able to use these scales. But do they do it reliably? And, do they use a wide range of points on them?

H2: To determine if the subjects used more than five categories when completing the questionnaire, the unique responses from each site for every item were counted.[12] Then, they were averaged among the five sites to control for the effects of sample size.[13] The mean number of unique responses for each item was the unit of analysis for the test of hypothesis 2. Because of the variance in the five sites' communication environments, only 66 of the 72 items were used for the analysis. Six of the items were not appropriate for all sites. There were no mass media.

The mean number of different responses for these 66 items was 14.6. The standard deviation was 1.73. This value is significantly greater than the possible number of different responses (5) in the ICA procedures ($t=5.55; p<.0005$). Further, even if the current ICA format were changed to 7,9 or 11 point scales, they would be inadequate to measure the discriminatory ability of the current subjects. T equals 4.39 ($p<.0005$) for a 7-point scale, 3.24 ($p<.005$) for a 9-point scale and 2.08 ($p<.05$) for an 11-point scale. Clearly, the subjects discriminate with finer detail than is allowed with

traditional fixed choice scales, such as used by the ICA and other audit systems.

H3: Workers do use these scales reliably.

Cronbach's alpha for the the mean of the five sites of each of the groups of items is presented below, along with the reliability coefficients for the comparable items reported by Goldhaber and Rogers (1979).

	fract	N of items	ICA	N of items
Info. Received Actual	.862	12	.882	13
Info. Received Ideal	.918	12	.852	13
Info. Sources Actual	.798	15	.699	12
Info. Sources Ideal	.838	17	.756	12
Organizational Outcomes	.862	11	.876	11

Let us examine the scale variances Goldhaber and Rogers report for the ICA procedures and compare them with the obtained variances from the new instrument. At the same time, let's multiply the variances by the reliabilities to determine the amount of reliable variance in these two different procedures. They are presented below.

	fract Var	X alpha	ICA Var	X alpha
Info. Received Actual	45,326.74	39,074.24	18.94	16.71
Info. Received Ideal	75,078.55	68,922.11	11.74	10.00
Info. Sources Actual	45,514.10	36,320.25	12.93	9.04
Info. Sources Ideal	57,289.53	48,008.62	10.08	7.62
Organizational Outcomes	57,773.66	49,800.99	16.86	14.77

Clearly, the procedures presented in this paper are capable of obtaining more reliable variance than the traditional procedures which the ICA employs.

V. Discussion and Conclusions

The results reported here suggest that the ICA procedures should be changed to use fractionation scales. They provide more precise measures of organizational communication, they more closely correspond to the real number system and they are reliable. Furthermore, the same substantive relationships were found with the precise scales as those reported by Goldhaber and Rogers. However, these findings are beyond the scope of this paper and the proprietary nature of the research prevents us from reporting them here. Let it suffice to to say that in terms of validity, a number of significant relationships were found between these scale items and organizational performance measures that theoretically should be related (e.g., absenteeism, productivity, safety, union activity). The generalizability of the reported findings may be enhanced because the data were gathered over a wide range of organizational settings and worker attributes. For these reasons, we have confidence in our recommendation that the ICA Communication Audit should be changed to incorporate fractionation scales rather than the crude, five point, fixed-choice items it currently employs.

VI. Summary

This paper proposed a new and more precise method of measuring organizational communication than the one currently used in the ICA Communication Audit and other similar audit systems. An audit was performed to test these procedures with employees from five different business groups from within a large multinational corporation. The results showed that 1) workers can use these scales, 2) they use them reliably, 3) these methods produce significantly more variance than traditional procedures, 4) workers discriminate a

greater number of values than allowed by traditional fixed choice items, and, 5) theoretically valid relationships were obtained. As a result of these findings, this paper advocates the adoption of direct-magnitude estimate fractionation scales for the measurement of organizational communication.

NOTES

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[2. A number of responses which may be labelled statistical outliers, those responses significantly discrepant from the rest of the distribution of responses were removed for this analysis. The criterion chosen to identify an outlier was if the value was greater than 3 s.d. from the next highest value. There were 19 (.3%) from the 4818 responses in the sample.

[3. The number of possible unique responses increases as a function of the number of people responding to an item. The mean number of different responses for the five sites in the sample demonstrates this clearly.

Site	Mean	N
1	10.56	43
2	13.23	64
3	13.56	86
4	16.35	198
5	18.92	254

Regression analysis indicates that for each additional subject, there is an increase in the number of responses of .03. Y(responses)=10.2 + .03 X(subjects). R=.97.

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COMMUNICATION SURVEY

The purpose of this survey is to evaluate our communication practices and find out what specific areas need improvement.

To do this, we need you to assess these communication practices. Your ideas and responses will help us make changes for the better.

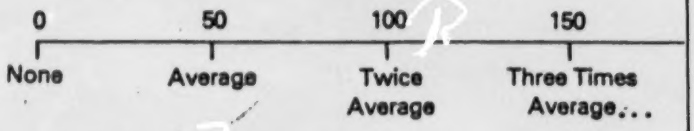
Please answer all questions, since each is important. Leave a question blank only if it does not apply to you. If there are any questions that you do not understand, please ask the survey administrator about them.

Your responses will be held confidential. Do not sign your name.

Thank you for helping us in this important evaluation.

DIRECTIONS

The questions below use the following scale:



On this scale, "50" is always average and "0" is none at all. For example, say that "50" represents the average amount of information an employee gets about safety practices. If "50" is the average amount, then **you** decide how much safety information **you** get. Use any number that is right for you. If you think you get less safety information than average, write a smaller number than "50". If you get more than an average amount of safety information, then write a number larger than "50" that shows how much more than average you get. If you feel you get about an average amount, then use "50". If you feel you get no information, then use "0". Place your number on the line or in the box to the right of each question.

EXAMPLE: If "50" is average accuracy, how accurate is your local T.V. news about .?

If your T.V. news about is above average in accuracy, then use a number above "50" to show how much. You might use "75", "90" or "140", depending on how above average the accuracy is. If you feel the reporting is less than average in accuracy, pick a number smaller than "50". If the reporting accuracy is average, use "50". If it is not accurate at all, then use "0".

RECEIVING TYPES OF INFORMATION

Below are types of information you may receive from various sources within your organization. Give each topic two scores. First, score each for how much of that information you get, if "50" is the average amount an employee gets. Then score each for how much you would like to receive, or how much you need to carry out your work activities in the best way you can.

TOPIC	How Much I Receive	How Much I Want/Need
Feedback on how well I do my job		
Day-to-day work instructions		
Goals and objectives of my work unit		
Feedback on my work units performance		
benefit plans and how they affect me		
Organizational policies		
Promotion and advancement opportunities		
pay plan and how it affects me		
Important new products, services or programs in my organization		
Changes in plans or schedules from my department's other functions which affect me		
How my job relates to the total operation of my organization		
Follow-up on questions, inquiries, suggestions and complaints I voice		
Other (Specify)		

SOURCES OF INFORMATION

You may receive information about and your job from various sources. We use sources for several reasons. Some sources are easier to get to, some give better quality information. Some sources are more accurate; others are more useful or timely. On the table below, score each of the sources you use for: (1) how much you use them,(2) how much you would like to use them, (3) ease of access, (4) how useful each is to you, (5) how accurate each is, and (6) how timely each is for getting you information. Remember: "50" is average. It will save you time if you do all of Column 1 first, then all of Column 2, etc.

PEOPLE	(1) How Much You Use	(2) How Much You'd Like to Use	(3) Ease of Access	(4) How Useful For You	(5) How Accurate	(6) How Timely
Co-workers in my unit						
Workers in other units						
My supervisor						
Middle managers						
Top managers						
The grapevine						
Group meetings, roundtables, informative mtgs.						
People who work for me						
Union representatives						

PUBLICATIONS	(1) How Much You Use	(2) How Much You'd Like to Use	(3) Ease of Access	(4) How Useful For You	(5) How Accurate	(6) How Timely
Local newspaper						
Local publications, newsletters						
Written letters, reports/memos						
Bulletin boards						
Company-wide Annual Report						
Union publications						
Monogram magazine						

OTHER SOURCES	(1) How Much You Use	(2) How Much You'd Like to Use	(3) Ease of Access	(4) How Useful For You	(5) How Accurate	(6) How Timely
Local public newspaper						
Local radio news						
Local T.V. news						
Other (Specify)						

WORK ENVIRONMENT

An important part of working within an organization is the satisfaction one receives from working there. If "50" is the average satisfaction, how satisfied are you with:

My plant's overall efficiency of operation _____

The overall quality of my organization's product and services _____

My organization's achievement of its goals and objectives _____

My organization's overall communication efforts _____

My relationship with co-workers _____

The extent to which my supervisor listens to me _____

How free I feel to speak my opinion to my supervisor _____

The contribution I make in accomplishing my organization's goals _____

The cooperation of co-workers to accomplish organizational goals _____

How proud I am to tell others I work for _____

How proud I feel to work in my plant, compared to any other _____

BUSINESS RELATED INFORMATION

Periodically, our communicators generate information about the Company and your local plant to try and keep you up to date. To see how effectively we have managed to get this information to you, could you tell us....

Compared to a year ago, how would you describe the employment level of your location?

1. in a downturn
2. stable
3. increasing

_____

Compared to a year ago, is the market for your location's products or services:

1. shrinking
2. stable
3. growing

_____

In coming years, do you feel your business will:

1. grow
2. stabilize
3. shrink

_____

What would you say are your location's three most important business objectives for this year?

1. _____
2. _____
3. _____

What are your business' end products? (locomotives, electric motors, etc.)

1. _____
2. _____
3. _____

List three customers who purchase these products:

1. _____
2. _____
3. _____

List three firms that compete with your local business:

1. _____
2. _____
3. _____

Last year, profits were about:

1. 2¢ / per dollar of sales
2. 6¢ / per dollar of sales
3. 15¢ / per dollar of sales
4. 27¢ / per dollar of sales
5. 48¢ / per dollar of sales

_____

BACKGROUND INFORMATION

Sometimes communication patterns are affected by such things as the length of time that a person has been on a job, and the number of different job experiences or types of work that he or she has done. These details will help us improve our communication techniques for all types of employee groups. To help us, could you tell us...

How old are you? _____

How many years have you worked for to the nearest year)? _____

Please indicate the last school year you completed:

6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 _____

How many months have you worked in your current position? _____

In which function is your current assignment?

1. Manufacturing
2. Engineering
3. Marketing or Sales
4. Finance
5. Relations
6. Legal
7. Research and Development
8. Strategic Planning
9. Program Management
10. Other (Specify)

_____

What is your sex?

1. Male
2. Female

_____

How many years have you worked in your current plant location? _____

Please identify your work status:

1. Hourly individual contributor
2. Non-exempt salaried clerk, secretary or technician
3. Exempt individual contributor
4. Supervisor or foreman
5. Manager

_____

During the past ten years, in how many organizations have you been employed? _____

WE WOULD APPRECIATE ANY IDEAS YOU CAN OFFER ON IMPROVING OUR COMMUNICATION EFFORT:

WE WOULD APPRECIATE YOUR COMMENTS ON THIS SURVEY:

THANK YOU VERY MUCH FOR YOUR TIME AND COOPERATION